

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

Integrated B.Sc. – M.Sc. Clinical Nutrition and Dietetics (CND)

First Year Semester-I April 2022 Examination

Time: 2.00 Hrs.

[Max. Marks: 50]

NUTRITIONAL BIOCHEMISTRY

Q.P Code: N1020

*Your answer should be specific to the questions asked
Draw neat labeled diagrams wherever necessary.*

LONG ESSAY

2x6=12Marks

1. What is the normal blood pH? Explain the renal mechanism by which acid-base balance is regulated in the body. (1+5)
2. Define Glycolysis. Write the reactions of aerobic glycolysis. (1+5)

SHORT ESSAY

6x4=24Marks

3. Define lipoproteins. Classify lipoproteins with their functions. (1+3)
4. Mention biochemical functions and deficiency diseases of Vitamin D. (2+2)
5. Enumerate the different components of Electron Transport Chain (ETC) with a neat labeled diagram.
6. Define Enzymes. Explain any 3 factors affecting enzyme activity. (1+3)
7. What are nucleosides and nucleotides? Give examples. (2+2)
8. What are the normal levels of serum calcium? Describe the factors affecting the absorption and functions of calcium. (1+1.5+1.5)

Short Answers

7x2=14Marks

9. Write any 4 characteristics of genetic code
10. What is Denaturation of proteins? List two factors causing Denaturation.
11. Write the deficiency diseases of: i) Ascorbic acid ii) Thiamine
12. Name two biologically important peptides with biochemical functions.
13. Define essential fatty acids and name them.
14. List any 4 functions of zinc.
15. Name the ketone bodies.

* * *



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

Integrated B.Sc. – M.Sc. Clinical Nutrition and Dietetics (CND)

First Year Semester-I April 2022 Examination

Time: 2.00 Hrs.

[Max. Marks: 50]

FUNCTIONAL HUMAN ANATOMY

Q.P Code: N1030

*Your answer should be specific to the questions asked
Draw neat labeled diagrams wherever necessary.*

LONG ESSAY:

6X2=12Marks

1. Describe the Interior of right atrium.
2. Explain Middle Ear with boundaries & contents

SHORT ESSAY:

6X4=24Marks

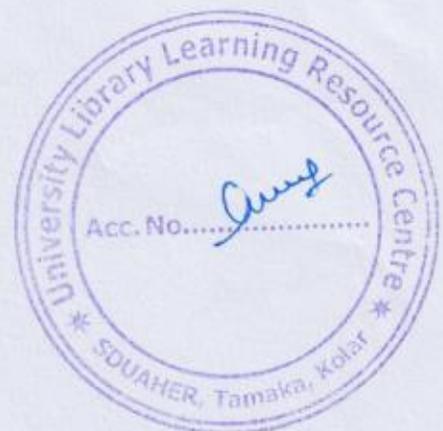
3. Describe the gross features of liver
4. Describe the microscopic structure of Large Intestine.
5. Describe the parts of long bone & mention any 1 classification with examples
6. Illustrate anterior relations of right kidney
7. Describe the Lymphatic drainage of Stomach
8. Oogenesis

SHORT ANSWER:

7X2=14Marks

9. List the barriers of Fertilization
10. List the sensory nerve supply of tongue
11. Mention the nerve supply of extra ocular muscles.
12. Draw a labeled diagram of Microscopic structure of skeletal muscle
13. List the deep nuclei of cerebellum
14. List the ligaments of spleen.
15. Mention the branches of arch of aorta.

* * *



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH
(A DEEMED TO BE UNIVERSITY)

INTEGRATED B.Sc. –M.Sc. CLINICAL NUTRITION AND DIETETICS (CND)

First Year Semester-I April 2022 Examination

TIME – 2.30 HRS

MAX MARKS: 80

Human Physiology

QP CODE: N1350

Your answers should be specific to questions asked.

Draw neat labelled diagrams wherever necessary

LONG ESSAY

2 X 10 = 20 Marks

1. Define cardiac output. Mention the normal value of cardiac output. Describe the regulation of cardiac output (2+1+7=10)
2. Define erythropoiesis. Describe the stages of erythropoiesis. Explain the role of hypoxia in regulating erythropoiesis. (2+5+3)

SHORT ESSAY

6 X 5 = 30 Marks

3. Describe spermatogenesis and factors influencing it
4. Explain the mechanism of gastric juice secretion
5. Define GFR. Mention the normal value of GFR. State two factors which affect GFR.
6. Define active transport. Classify active transport with an example for each
7. Name the hormones that maintain the normal calcium in the blood. List two functions of calcium
8. Define and classify Hypoxia with an example for each classification.

SHORT ANSWERS

10 X 3 = 30 Marks

9. List the salivary glands.
10. List the functions of haemoglobin
11. List the functions of the liver
12. Define Residual volume. Mention its normal value.
13. Draw a neat, labelled diagram of an ECG
14. Mention three differences between Gigantism and Acromegaly
15. Classify the body fluid compartments
16. List the functions of the plasma proteins
17. Define menstrual cycle give its average duration.
18. List the functions of hypothalamus

* * * * *



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)

Integrated BSc. MSc Clinical Nutrition and Dietetics

First Year I Semester April 20-22 Examination

Time: 2.30 Hrs.

[Max. Marks: 80]

NUTRITIONAL BIOCHEMISTRY

QP CODE: N1360

Your answers should be specific to questions asked.

Draw neat labelled diagrams wherever necessary

Long Essay

2x10=20marks

1. Define Transamination. Write any four salient features of transamination reaction. Give two reactions catalyzed by Transaminases. 2+4+4
2. Define Gluconeogenesis. List the substrates for Gluconeogenesis. Enumerate the reactions by which lactate is converted to glucose 2+2+6

Short Essay

6x5=30 marks

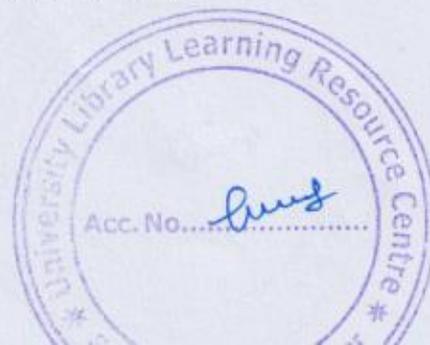
3. Define genetic code. Write the characteristics of genetic code. Add a note on the degeneracy of codes. 1+3+1
4. Define fatty liver. Mention the causes of fatty liver. Add a note on lipotropic factors. 1+2+2
5. Describe the transport, storage and functions of Iron. 2+1+2
6. Define lipoproteins. Classify lipoproteins with their functions. 1+4
7. Mention the sources, RDA and deficiency manifestations of Vitamin D. 1+1+3
8. Classify proteins based on their function with one suitable example for each.

Short answers

10x3=30 marks

9. Define Epimers. Give two examples for Epimers. 1+2
10. Mention any three characteristic features of peptide bond.
11. What is active site of an enzyme? List 4 features of active site. 1+2
12. What are Glycolipids? Give two examples. 1+2
13. What are Chylomicrons? Mention its functions 2+1
14. What are nucleosides and nucleotides? Give examples. 1.5+1.5
15. What are ketone bodies? Mention 2 causes for Ketoacidosis. 2+1
16. What are Disaccharides? Give two examples with their composition. 1+1+1
17. What is active transport? Give two examples. 1+2
18. Write the Biological reference range for serum Sodium, Potassium and Blood Calcium 1+1+1

* * * *



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH

(A DEEMED TO BE UNIVERSITY)

INTEGRATED B.Sc. –M.Sc. CLINICAL NUTRITION AND DIETETICS (CND)

First Year Semester-I April 2022 Examination

TIME – 2.30 HRS

MAX MARKS: 80

Functional Human Anatomy

QP CODE: N1370

Your answers should be specific to questions asked.

Draw neat labelled diagrams wherever necessary

Long Essays

2 X 10 = 20 marks

1. Describe the coverings, external features and applied aspects of Heart
2. Classify the bones. Explain general features blood supply and applied aspects of bones

Short Essays

6 X 5 = 30 marks

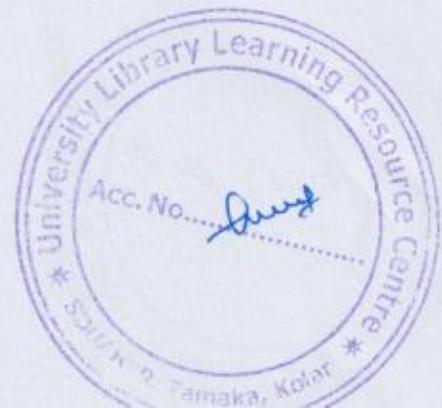
3. Describe microscopic structure of Vein
4. List any 5 difference between right and left lung
5. Describe the internal features of Right atrium
6. Describe the external and internal features of Second part of Duodenum
7. List the parts of Lateral ventricle
8. Name the extra-ocular muscles and their actions

Short answers

10 X 3 = 30 marks

9. Describe Ovulation
10. Describe microscopic structure of white fibrous cartilage
11. List the fibers passing through internal capsule
12. List the parts of the Thyroid gland
13. List the coverings of Kidney
14. List the nuclei of Thalamus
15. Illustrate the lymphatic drainage of tongue
16. List the extra ocular muscles with nerve supply
17. List the functions of Spleen
18. Mention the functions of gall bladder

* * * *



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH
(A DEEMED TO BE UNIVERSITY)

INTEGRATED B.Sc. –M.Sc. CLINICAL NUTRITION AND DIETETICS (CND)

First Year Semester-I April 2022 Examination

TIME – 2.30 HRS

MAX MARKS: 80

Food Facts and Principles -I

QP CODE: N1381

Your answers should be specific to questions asked.

Draw neat labelled diagrams wherever necessary

Long Essay

2 x 10 = 20 marks

1. Explain in detail the effect of cooking on various products.
2. Explain how colloids are classified based on the physical state of dispersed phase and dispersed medium,

Short Essay

6 x 5 = 30 marks

3. Explain cereal protein and its role in cookery
4. Explain enzymatic browning reaction with schematic diagram
5. Explain rancidity process in fats and oils
6. Describe flavour compound present in fruits and vegetables
7. Discuss cyanide poisoning in relation with pulses consumption
8. Explain the structure of water molecule with diagram

Short Answer

10 x 3 = 30 marks

9. Define puffing and extrusion process
10. List the biological value of legume proteins such as peanut, soya bean
11. List changes that occur during dextrinization process
12. List the methods employed to reduce anti-nutrient content in pulses and legumes
13. Define flash point and fire point
14. Define blanching and list steps involved in it.
15. Write a note on Arrhenius equation
16. Write a note on polar covalent bonds
17. Define the shortening power of fats and oils
18. Write a Note on Maillard Browning.

* * * *

